In the Claims:

1.-40. (Canceled)

41. (Original) A system for fabricating optical microstructures comprising:

a cylindrical platform that is configured to hold a radiation sensitive layer thereon;

a radiation beam system that is configured to impinge a radiation beam upon the radiation sensitive layer on the cylindrical platform; and

a controller that is configured to rotate the cylindrical platform about an axis thereof while simultaneously axially rastering the radiation beam across at least a portion of the radiation sensitive layer to image the optical microstructures in the radiation sensitive layer.

42. (Original) A system according to Claim 41 wherein the controller is further configured to simultaneously continuously translate the cylindrical platform and/or radiation beam axially relative to one another, to image the optical microstructures in a spiral pattern in the radiation sensitive layer.

43. (Original) A system according to Claim 41 wherein the controller is further configured to simultaneously stepwise translate the cylindrical platform and/or radiation beam axially relative to one another, to image the optical microstructures in a band pattern in the radiation sensitive layer.

44. (Original) A system according to Claim 43 wherein the controller is configured to simultaneously stepwise translate by stepwise translating the cylindrical platform and/or radiation beam axially relative to one another at a predetermined rotation angle of the cylindrical platform to image the optical microstructures in an aligned band pattern in the radiation sensitive layer.

45. (Original) A system according to Claim 43 wherein the controller is configured to simultaneously stepwise translate by stepwise translating the cylindrical

platform and/or radiation beam axially relative to one another at staggered rotation angles of the cylindrical platform to image the optical microstructures in a staggered band pattern in the radiation sensitive layer.

46. (Original) A system according to Claim 41 wherein the controller is configured to simultaneously axially raster the radiation beam across at least a portion of the radiation sensitive layer while varying amplitude of the radiation beam to image the optical microstructures in the radiation sensitive layer.

47. (Original) A system according to Claim 41 wherein the controller is configured to simultaneously axially raster the radiation beam across at least a portion of the radiation sensitive layer while continuously varying amplitude of the radiation beam to image the optical microstructures in the radiation sensitive layer.

48. (Original) A system according to Claim 41 wherein the radiation beam is a laser beam.

49. (Original) A system according to Claim 48 wherein the radiation beam system comprises:

a continuous wave laser beam; and

a modulator that is configured to modulate the amplitude of the laser beam and to oscillate the laser beam to raster the laser beam across at least a portion of the radiation sensitive layer.

50. (Original) A system according to Claim 41 wherein the controller is configured to rotate the cylindrical platform while simultaneously axially rastering the radiation beam at sufficient speed, relative to rotating, such that the radiation beam images an optical microstructure over a plurality of scans of the radiation beam.

51. (Original) A system according to Claim 41 wherein the radiation beam system further comprises an auto focus system that is configured to vary a focal

length of the radiation beam to at least partially compensate for radial variation in the cylindrical platform and/or thickness variation in the radiation sensitive layer.

52. (Original) A system according to Claim 41 wherein the radiation beam system further comprises an auto focus system that is configured to simultaneously vary a focal length of the radiation beam to image portions of the optical microstructures at varying depths in the radiation sensitive layer.

53. (Original) A system according to Claim 41 wherein the controller is further configured to simultaneously axially raster the radiation beam along first and second opposite axial directions across at least a portion of the radiation sensitive layer to image the optical microstructures in the radiation sensitive layer along both the first and the second opposite axial directions.

54. (Original) A system according to Claim 41 wherein the controller is further configured to simultaneously axially raster the radiation beam along first and second opposite axial directions across at least a portion of the radiation sensitive layer to image the optical microstructures in the radiation sensitive layer along the first axial direction and to blank the radiation beam along the second axial direction.

55. (Original) A system according to Claim 41 wherein the cylindrical platform is at least about one foot in circumference and/or at least about one foot in axial length.

56. (Original) A system according to Claim 55 wherein the cylindrical platform is rotated at angular velocity of at least about 1 revolution per minute.

57. (Original) A system according to Claim 56 wherein the rastering is performed at frequency of at least about 1 kHz.

58. (Original) A system according to Claim 41 wherein the controller is configured to control rotation of the cylindrical platform and axial rastering of the radiation beam continuously for at least about 1 hour.

59. (Original) A system according to Claim 58 wherein the controller is configured to control rotation of the cylindrical platform and axial rastering of the radiation beam continuously for at least about 1 hour to fabricate at least about one million optical microstructures.

60. (Original) A system according to Claim 41 wherein the optical microstructures comprise microlenses.

61. (Original) A system according to Claim 41 further comprising:

a developing station that is configured to develop the optical microstructures that are imaged in the radiation sensitive layer to provide a master for optical microstructures.

62. (Original) A system according to Claim 41 wherein the cylindrical platform also is configured to hold thereon the radiation sensitive layer and a substrate on the radiation sensitive layer that is transparent to the radiation beam, and wherein the controller is further configured to axially raster the radiation beam through the substrate that is transparent thereto across at least a portion of the radiation sensitive layer to image the optical microstructures in the radiation sensitive layer.

63. (Original) A system according to Claim 62 wherein the radiation sensitive layer is a negative photoresist layer such that portions of the negative photoresist layer that are exposed to the radiation beam remain after development.

64. (Original) A system according to Claim 41 wherein the radiation sensitive layer is a negative photoresist layer such that portions of the negative photoresist layer that are exposed to the radiation beam remain after development.

65. (Original) A system according to Claim 62 wherein the substrate is a flexible substrate.

66. (Original) A system according to Claim 1 wherein the cylindrical platform is configured to hold thereon the radiation sensitive layer sandwiched between a pair of outer layers.

67. (Original) A system for fabricating optical microstructures comprising:

a cylindrical platform that is configured to hold a radiation sensitive layer thereon;

a laser beam system that is configured to impinge a laser beam upon the radiation sensitive layer on the cylindrical platform; and

a controller that is configured to rotate the cylindrical platform about an axis thereof while simultaneously axially rastering the laser beam across at least a portion of the radiation sensitive layer, while continuously varying amplitude of the laser beam and while simultaneously translating the cylindrical platform and/or laser beam axially relative to one another, to image the optical microstructures in the radiation sensitive layer.

68. (Original) A system according to Claim 67 wherein the controller is configured to rotate the cylindrical platform while simultaneously axially rastering the laser beam at sufficient speed, relative to rotating, such that the laser beam images an optical microstructure over a plurality of scans of the laser beam.

69. (Original) A system according to Claim 68 wherein the laser beam system further comprises an auto focus system that is configured to vary a focal length of the laser beam.

70. (Original) A system according to Claim 69 wherein the controller is further configured to simultaneously axially raster the laser beam along first and second opposite axial directions across at least a portion of the radiation sensitive

layer to image the optical microstructures in the radiation sensitive layer along the first axial direction and to blank the laser beam along the second axial direction.

71. A system according to Claim 70 wherein the cylindrical platform is at least about one foot in circumference and/or at least about one foot in axial length.

72. A system according to Claim 71 wherein the controller is configured to control rotation of the cylindrical platform and axial rastering of the laser beam continuously for at least about 1 hour to fabricate at least about one million optical microstructures.

73. A system according to Claim 72 wherein the optical microstructures comprise microlenses.

74. A system according to Claim 73 further comprising:

a developing station that is configured to develop the microlenses that are imaged in the radiation sensitive layer to provide a microlens master.

75. A system according to Claim 74 wherein the radiation sensitive layer is a negative photoresist layer such that portions of the negative photoresist layer that are exposed to the laser beam remain after development; and

wherein the cylindrical platform also is configured to hold a substrate on the negative photoresist layer that is transparent to the laser beam and wherein the controller is further configured to axially raster the laser beam through the substrate that is transparent thereto across at least a portion of the negative photoresist layer to image the optical microstructures in the negative photoresist layer.